Narrating Darwinian inheritances:

fields, life stories and the literature-science relation[1]

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'We are in open fields now, and the pace is tremendous!'

Who narrated this experience? Perhaps it was the young Charles Darwin in a letter to a member of his family, re-living a moment in the Staffordshire countryside, fox hunting around Maer. The language is appropriately Darwinian: 'Open fields' is, of course, the phrase with which the older Darwin would gesture towards the future of evolutionary research, and appears, famously, at the end of the *Origin* as he imagines seeing, in the distant future 'open fields for far more important researches'.[2] *Open Fields* is also the main title of Gillian Beer's 1996 work on science and cultural encounter; a collection of studies that places narratives by and about Darwin the voyager-naturalist at its centre. One of the aims of this essay is to comment on the rich openings offered by Beer's seminal contribution to the field of Victorian science and literature, including her great study of the place of narrative in Victorian science, *Darwin's Plots* (1983). As a consequence, it will reflect on what it meant and means to research within, or contribute to, the territorial entity of an intellectual field.

However, the words quoted at the beginning of this discussion do not belong to Darwin; instead, they belong to the historian Noel Annan, and the experience he imagines is narrated in his influential essay of 1955, 'The Intellectual Aristocracy', his study of the endogamous marital strategies pursued by the British intellectual and professional classes in the nineteenth century.[3] It is one of those wonderful moments when literary metaphor breaks into a piece of writing that sought to make a contribution to the field of social and intellectual history. Annan, who saw his theme of familial relations as a way of narrating the 'poetry of history', imagined he and his audience to be on a great fox-hunting chase, dashing across the English countryside from estate to estate, his hounds sniffing out marriages, offspring, and intellectual capital.

Annan's words forge, nonetheless, a connection to Darwin: in making his remark about dashing across 'open' English fields, his biographical quarry was the Darwin family – or, to be more precise, the Darwin-Wedgwoods. For Annan makes his remark about being in 'open fields' precisely as he gallops towards the 'Darwoods' of Staffordshire and Shropshire, as James Moore has named the tribe.[4] The 'scent' that Annan's hounds followed had been laid down, among other sources, by the *Dictionary of National Biography*. Annan's work on Victorian intellectual life was premised on assumptions about distinctive intellectual achievement, exemplified for Annan in the life of Leslie Stephen, the great conductor and anatomist of the canonizing, yet generically mixed, *DNB*.[5] As the *DNB* demonstrates, life stories are narratives comprising a complex variety of written genres and 'knowledge-dialects' (a phrase borrowed from Gillian Beer), available to be collected, manipulated and organised. The knowledge-dialects might consist of anecdotes about moral, intellectual or even professional attributes, forming the exemplar basis for sympathetic identification. Alternatively the knowledge-dialects might tabulate lines of descent and marital patterns that might be analyzed as 'data'. In any event, life stories may be shaped around precise disciplinary protocols; thus shaped and mediated, they can contribute to a more amorphous intellectual field, and be used to narrate bigger stories about biological life and its patterns of inheritance.[6]

The 'Darwoods' embody my topic of 'inheritance' in two senses: firstly, they were very concerned about their own continuity of inheritance across the generations, ensuring the transmission of industrial and professional expertise, capital and property: quite literally, the inheritance of fields in Staffordshire, sites of industrial production in the Potteries, and a thriving medical practice in Shrewsbury. The Darwins developed, of course, another interest in inheritance: descent as an object of knowledge and scientific investigation. As the *DNB* so amply illustrates, Darwin's sons, Sir Francis and Sir George along with other descendants, became important contributors to late nineteenth-century and early- to mid-twentieth-century science.[7] This intellectual inheritance was passed initially from Erasmus to Robert Darwin; was extended and profoundly publicised by Charles Darwin, and extended further again by the presence of Francis Galton in the clan. Galton's use of life

stories in his work on inheritance and eugenics will be a later focus of my essay. Thus, I will be concerned with the entangled senses of familial, biological and intellectual inheritance; something that I'll explore in my account of a text about biography by Francis Galton published in *Sociological Papers* of 1904, his so-called 'Golden Book of Thriving Families', an extension of the biographical and schematic modes of representing inheritance that Galton had set out in *Hereditary Genius* (1869), and *Men of Science* (1874). *Sociological Papers* was the new 'house journal' of the new discipline of sociology that was seeking to establish itself within early twentieth-century British scientific culture. In 1904 it hosted a vibrant debate about biological inheritance, a concept split between competing intellectual factions. Galton's eugenics and the debate on heredity were framed in 1904 by the host discipline of sociology, and curiously connect Galton to a surprise 'heir' in the form of Noel Annan's metaphorical dash across the English countryside on the hunt for intellectual families, and the question of Victorian literature and science.

I
Open Fields

A context can be established by exploring the field-defining methods of narrative analysis that Gillian Beer has used in monitoring the flow of the 'two-way traffic' between science and literature, while also trying to think about how life writing might be analyzed in this new field. Beer's *Darwin's Plots* focused on the opacity of language in evolutionary science in such a way that it literally opened a new field by calling attention to this common ground between literature and science. As she recognized, Darwin's writing was a powerful generator of density and complexity; despite, or maybe because of his care, scrupulousness, and occasional hesitancy with the medium. There is a breathtaking range of reference – in fact, it is astonishing to revisit *Darwin's Plots* and realise just how many frames of scientific and narrative reference Beer pursued to situate Darwin's work in context. To give just one example, a rich phase of her discussion of Darwinian myths begins with Darwin on variation (a concept allied to inheritance, incidentally), moves to E.B. Tylor's

anthropological theory of development and a consideration of degeneration; then, taking in Kingsley's *Water Babies* and its narratives of simian degeneration, we are told of the gorilla hunter Paul Du Chaillu's appearance before the British Association for the Advancement of Science (BAAS) in 1861 – an event which did much to shape reception of Darwin's theory around narratives of human simian origins.[8] *Darwin's Plots* was prescient as a generator of future research questions, and the more detailed interventions that they invited.[9] *Darwin's Plots* was a monograph and, simultaneously, an embryonic research field. It is a crucially enabling part of our field's intellectual inheritance, not least because of the way in which its focus on the field-crossing capacities of language eschews genius-led models of field domination of the kind that we will see the eugenicist Karl Pearson asserting: as Beer argues, 'an ecological rather than a patriarchal model is most appropriate […] in studying [Darwin's] work.'[10]

Understandably, science and literature scholarship inspired by the first phase of Gillian Beer's work most often researches a relationship between scientific texts and fictional narratives. This is important work because it helps us to move beyond C.P. Snow's influential, but ultimately partial, account of 'two cultures' of the arts and the sciences unable to converse with one another.[11] Beer's field-shaping contention in *Darwin's Plots* was the idea of 'two way traffic', through which scientific discourse was appropriated and refashioned by novelists; and crucially, through which artistic discourse shaped the construction of scientific concepts.[12]

We come again to the concept of the field. For Gillian Beer, concepts such as 'natural selection' are 'always on the edge of metaphor'; and the term 'field' is no exception. *Open Fields: Science in Cultural Encounter* (1996) is a collection of essays that inaugurated what might be seen as the second phase of her work. The exchanges between ethnographic narrative, fiction and the wider culture were again mapped in persuasive detail: for instance, in the essay 'Can the Native Return?', the story of exile and return experienced by the Feugian 'Jemmy Button' from Darwin's Beagle narrative (1845), is read through the public debate about the place played by savagery in the loss of the Franklin expedition, and *The Return of the Native* (1879), Hardy's story of exile, return and alienation. In addition, Beer reflected more on the

idea of the field as a territorial entity. *Open Fields* memorably includes within its early pages a wonderful passage on the work of the Scottish Enlightenment philosopher Dugald Stewart from Thomas Carlyle's 'The State of German Literature', published first in the *Edinburgh Review* (1827). Carlyle plays with the concept of a field:

> [Stewart] does not enter into the field to till it; he only encompasses it with fences, invites cultivators, and drives away intruders: often (fallen on evil days) he is reduced to long arguments with the passers-by, to prove that this is a field, and that this so highly prized domain of his is, in truth, soil and substance, not clouds and shadow.[13]

Beer cites this as an evocative image of the territorial aspect of intellectual life, and the different models of territoriality, (private/possessive, collective/common, expansive/confined) that were increasingly active in early nineteenth-century literature, philosophy and science In fact, a closer look at Carlyle's review of German literature demonstrates a strain of resistance to materialist traditions of philosophy and science; indeed, it is the founding moment of the Darwin intellectual 'inheritance' itself that is resisted, or turned out of the field, one might say. In a footnote surveying philosophical schools, Carlyle implies that Erasmus Darwin, representative of the 'idolatory of materialism', would not have been admitted into Stewart's field.[14] Beer's reflection on the field is alert to the fact that 'the diversity of knowledge-dialects may set groups at odds with each other. Territory-rights get involved here'.[15] I find Beer's idea of 'knowledge-dialects' suggestive, and it is symptomatic of her sense of the place of literature in the literature-science relation as developed in *Open Fields*: literature as 'dialect' in so far as it is a mode of allusion, mode of signification, and tactic in a scheme of argument and contestation.[16] Fields may be open, but they may also be fiercely contested - something that I'll demonstrate when I examine the debate about biological inheritance and the function of biographical data at the turn of the century, focusing in particular on the formation of the Sociological Society in 1904. My example will put into focus the question of who – or which discipline – seeks to 'host' the field, or an interaction between fields, on a given occasion; and which knowledge-dialects, as approaches to the understanding of life stories as evidence of patterns of inheritance, are given priority.

Beer's central theme in *Open Fields* is cultural encounter, so this work went significantly beyond the research questions posed initially by *Darwin's Plots*. The essays comprising *Open Fields* foreground cultural encounter: between different ethnicities and cultures primarily, but also, and no less importantly, between different disciplines and knowledge-dialects. For instance, anthropology so often went hand in hand with life science research and speculation (Beer's essay 'Speaking for the Others' is a good example of this). Anthropology sought to account for and measure differences exposed by the encounter, as well as the terms on which contact was maintained: in other words, the patterns of sympathy or antipathy that might follow from an encounter. In this sense, it seems to me that *Open Fields* initiated a move which opened the field of science and literature studies further to research on the emotions, and the evolution of sensations such as sympathy.

Turning again to the essay 'Can the Native Return?', Beer identifies anthropological readings of Jemmy's re-assimilation into Fuegian custom by Darwin and others, that oscillated between sympathy and antipathy at the outcome, and which maps onto the sympathy and antipathy for 'savage' Inuit testimony expressed by John Rae and Charles Dickens respectively. It traces these emotive dualisms to Hardy's fashioning of an evolutionist's narrative perspective on his 'natives' that is at once empathetic and detached; a blend, Beer argues, 'perhaps attainable only in the thickness of language of a fiction.'[17] Such moves help to shape an important new context for the study of science and literature, a context that recognises the 'thickness' of life-writing's contribution to the history of the emotions.

It is timely recognition, as important new work on life-writing as a contribution to scientific knowledge-dialects has recently been collected together by Thomas Söderqvist.[18] Söderqvist's collection breaks new ground by going significantly beyond British nineteenth-century history of science, and having little to say about Darwin himself.[19] Nonetheless, one can argue that this collection's approach to life writing, as a phenomenon embedded in the production of science and its authority, can provide us with new ways of thinking about Charles Darwin. Darwin was himself a biographer of his grandfather, Erasmus.[20] He was also an autobiographer who, in the course of writing his autobiographical sketch, wrote a powerful biographical vignette of his

father. This material became foundational to the life and letters volume that Francis Darwin published about his father, as well as Francis Darwin's entry on his father submitted to the original late-Victorian *DNB*.[21] There is not really the space to go into the detailed reading of this material here – suffice it to say that Darwin presents his grandfather and father as sympathetic, exemplary professionals, dedicated to the extension of the social and moral sympathies. Moreover, Darwin also implied that these were positive qualities and aversions to the infliction of pain that he himself may have inherited from his forebears; he took this to be grounds for supposition that such traits were generally heritable among humans. There are, in fact, striking similarities between the sympathy that Darwin saw exemplified in the life stories that he told of his grandfather and father, and the evolutionary growth of sympathy and its distribution among social classes that Darwin narrated in chapter V of the *Descent of Man* (1871). Darwin's ventures in biography and autobiography seem to me to be ambiguously narrated, making them available to two different, and much grander, narratives of social and cultural development. Both were also at play in *The Descent*: one was premised on sympathy as a foundational, evolving emotional quality; the other implied the need for the actuarial collection of, and selecting from, eugenically robust 'data' from life-writing that seemed to demonstrate heritable traits. Life writing became a generic vehicle for the discussion of models of biological inheritance; in turn, it became entangled with the discussion of lines of intellectual inheritance between leading intellectual and professional families – among which the Darwin family was a significant player. Life writing was also, for Darwin, an educative vehicle: his theory of sympathy acknowledged a role for cultural inheritance, and his autobiography was written for his children (each received a hand-written copy). Life writing was, thus, a literary contribution to the shaping power of 'culture'; though how 'culture' would be shaped - by eugenic or other means - was itself a question.

By contextualizing Darwin's life-writings within debates about sympathy and eugenics in the naturalistic scientific tradition, we can reconnect to the varied ways in which that tradition came to frame literature as a contributor to 'culture', the resonant word that came to be widely associated with Matthew Arnold in the period. In an important argument that questions the adversarial nature of relations between Victorian

literature and science, Paul White's account of 'Ministers of Culture' in the 1870s-'80s identifies ways in which both Arnold and T.H. Huxley were closely networked members of 'diverse, but complementary elites' who worked out a shared 'vocabulary and web of associations for cultural production'.[22] Yet, as Beer would argue, vocabularies could also be distinctively accented, steering the debate about science, literature and culture in varied directions. It was Huxley, from within the naturalistic tradition, who yoked the idea of 'culture' to the vocabulary of the 'intellectual field'. Huxley's famous contributions to the Romanes Lecture of 1893, 'Prolegomena' and 'Evolution and Ethics' can be viewed as a refutation of a eugenic approach to culture. Huxley's essay begins with the controlling allegorical figure of the colonial administrator (the stock breeder), but ends by rejecting that very figure and the fantasy of the 'pigeon-fanciers polity' on which it was based. Instead of the eugenic stock breeder, Huxley emphasized the importance of historic networks and institutions of sympathy-building, which include the traditions of literature. It is significant that Huxley should reach for the metaphor of the 'field' - 'intellectual field' - as the rallying, organisational space in which the sympathies, identifications and curiosities are cultivated through symbolic imitation and experimentation.[23] To adapt a term coined by Daniel C. Dennett in *Darwin's Dangerous Idea* (1995), Huxley rejected the actuarial approach of eugenics and sought a solution through 'the Library of Babel'.

II

The Literature and Science Relation

Of course, such panoramic conceptions of a 'field' need to be broken down into something more precisely historical and amenable to analysis. As Paul White's work suggests, the literature and science relation itself needs to be seen in the context of the rise of a range of disciplines and interconnected elites in the late nineteenth century that played host to urgent interdisciplinary exchanges about the need to investigate and ameliorate social structures and social bonds.[24] To try to conceive of 'science' as a unitary field – or as a component of a conjoined field of 'literature and science' – is probably not tenable. There were multiple branches of 'science' to harness, even in the

nineteenth century as scientific disciplines and sub-disciplines proliferated. This is where it is helpful to appeal to the notion of 'host fields' and the range of disciplinary exchanges that sought to frame and appeal to aspects of science and literature as 'thought dialects'. Once this is acknowledged we can begin to see that whatever intellectual traffic is flowing is moving in more than just two directions: we've instead reached a kind of intellectual interchange that more resembles Spaghetti Junction than an open field.

The host field on which I focus will be the emerging discipline of sociology; an embryonic one, in Britain at least. Thus, my focus is the inaugural meeting of the Sociological Society at the London School of Economics, 16 May 1904. The principal initiators of the Society were Patrick Geddes, the evolutionist, sexologist and proponent of the new discipline of urban reform he called 'civics'; and Victor Branford, a former journalist, a businessman, and, like Geddes, deeply interested in the intellectual foundations of social reform.[25] Their efforts to form the Society led them to appeal to the highest intellectual and political echelons of British society.[26] For their first meeting, recorded in their new journal *Sociological Papers*, they recruited Francis Galton who read a paper on eugenics that aimed to direct the work of the new Society. This was followed by a vigorous public debate about biological inheritance in which a range of leading intellectual figures participated. Galton, a representative of the Darwin family and its distinctive intellectual inheritance, sought to steer the work of the new 'field' with his founding paper on a so-called 'Golden Book of Thriving Families'. This was effectively presented as 'data' on the 'hereditary genius' on display in intellectual families (also published in *Sociological Papers*.) Galton's paper on eugenics, and the various recorded contributions to the debate, embed, and appeal to, 'literature' as a variable mode of allusion and 'knowledge-dialect'. However, as I shall argue, Galton's reading of Darwin's exercises in life-writing as set out in the 'Golden Book of Thriving Families', spectacularly mistranslates one particular dialect of literature, which was an active presence in the opposition to eugenics in the debate about inheritance.

Darwin's theory of inheritance was intensely debated at the end of the nineteenth century, and into the early years of the twentieth. The discovery of

Gregor Mendel's researches marked a watershed, and the celebrations to mark Darwin's centenary, especially its official scientific publication, *Darwin and Modern Science* (1909) was marked by a respectful critique of Darwin's theory of inheritance, especially evident in the essays by William Bateson and Hugo de Vries. In many ways, the shift towards a theory of particulate inheritance – Weismann's theory of the germ plasm and Mendel's work on the laws of inheritance and variability – seemed to bestow greater authority on Francis Galton's eugenics. This was clearly why the founders of the Sociological Society worked so hard to secure Galton as one of their keynote speakers. They also secured the services of the eugenicist Karl Pearson to chair the event: by this time, Pearson was directing a biometric laboratory at University College, London. Angelique Richardson's excellent work on the context of eugenics focuses on this very meeting, and she notes that Galton's presence signalled a moment when eugenicists strategically acknowledged the importance of environmental reform to its programme: Galton spoke alongside Geddes, whose programme of 'civics' was based on a neo-Lamarckian theory of inheritance.[27]

However, as the pages of the *Sociological Papers* testify, the emergent 'host' field of sociology actually coordinated a much more vigorous debate about inheritance and life stories than the 'official' conciliatory position of the newly formed Society.[28] Many of the major, and significantly divergent, voices on the question of inheritance were present at the meeting to register views: Pearson and Weldon put the case for the actuarial method. William Bateson, the most vigorous critic of the value of Pearson's actuarial methods of eugenic measurement and selection, corresponded with the journal.[29]

H.G. Wells and George Bernard Shaw made contributions to this vibrant debate, in which a striking tactic was literariness, or a dialect invoking allusion, sympathy and identification. Thus, Galton's paper begins in imaginative, fabular mode, inventing a 'clerisy' of wise creatures from a wide range of species who take it upon themselves to devise an 'absolute morality'. Of course, they can't agree (neither fishes nor cuckoos rate maternal affection as a must-have ethical quality), and Galton's point is to warn against 'entangling ourselves' with the 'unanswerable'

questions to which moral universalist aspirations give rise. However, 'entanglements' of all kinds, particularly discursive and semantic ones, continue to multiply in the face of this approach. Galton's relativism – 'fitness' is species, and indeed class, specific – is secured with reference to characters who played an important role in embodying sympathy and moral roundedness in the Victorian cultural field: 'Society would be very dull if every man resembled the highly estimable Marcus Aurelius or Adam Bede'.[30]

Literary allusiveness was extended further, but to a different end, by Henry Maudsley, the medical psychologist, and another participant in the debate. Maudsley extended the literary dialect in a distinctively biographical direction, citing the example of Shakespeare's genius in order to challenge Galton's underlying thesis of hereditary genius: Shakespeare, after all, had ordinary parents, and brothers who were not successful. Maudsley's discourse goes on to become strikingly opaque and difficult to read, in ways that underline the degree of uncertainty about the science of inheritance as he urges the need to trace its laws to 'deeper' levels than Galton and Pearson can possibly conceive: locating 'the germ composing corpuscles, atoms, electrons, or whatever else there may be […] we shall find these subjected to subtile and most potent influences of mind and body during their formations and combinations'. The scientific and imaginative desire to engage human depth leads Maudsley to reject the stock-breeding analogy, and he concludes his intervention with a romance-affirming quote from Shakespeare on the impossibility of overturning loving instincts and the bonds that they forge; 'You may as well try to kindle snow by fire/ As quench the fire of love by words'.[31]

Maudsley, a convinced hereditarian, notably opposes a Galtonian view of actuarial selection with the words of Shakespeare, the 'genius' from an undistinguished family. And yet, Galton proposed to have the last word on biography and the hereditary transmission of intellectual distinction in 'data' that he put forward as foundations of his 'Golden Book of Thriving Families': a resource that he charged the Sociological Society to maintain and further develop. In a paper entitled 'A Eugenic Investigation: Index to Achievements of Near Kinsfolk of Some of the Fellows of the Royal Society', he presented 'data' in support of his case for

the inheritance of intellectual distinction. Inevitably, the subjects of the survey are self-selecting members of the Royal Society, people who responded to Galton's questionnaire (or 'circular'): and they include Charles Booth, the Palgraves, the Hookers, the Roscoes, the Stracheys and, of course, the Darwins, or 'Darwoods'. Galton's paper begins each entry – it's an 'index' after all – with a central FRS, and includes forebears and descendants who have achieved equivalent 'noteworthiness'. Corroboration of this was sought through two sources – *Who's Who*, but also, the more august and distinguished *DNB*. It is possible to look forward, at this point, to Noel Annan's famous essay on 'The Intellectual Aristocracy', with which I began this essay: Annan, metaphorically charging across 'open fields' at a tremendous pace, sniffing out endogamous marital patterns, using the *DNB* for corroboration. Annan, however, knew he was reading biographical stories about his subjects, and claimed to make a contribution to the 'poetry of history' accordingly. What is striking about Galton's use of biographical material is the way that it is appropriated as 'data' for actuarial, eugenic purposes – for example, Charles Darwin's comment on his father from the autobiography, and repeated in the *DNB* entry by Francis Darwin, that he was 'the wisest man I ever knew' – is presented as evidence of a heritable trait, rather than being cast in the literary dialect of sympathy building, veneration and identification that it so clearly is.[32]

The debate about inheritance and intellectual families, and the conflicting appeals to biography and the dialects of literary allusiveness conducted at the inaugural meeting of the Sociology Society, should be seen in the context of a grander narrative to which Karl Pearson, as chair of the meeting, alludes. It signals the terminus of the Victorian age, marked by the death of its leading statesmen and men of science, so that the presence of the aged but still very active Galton was seen as a reassuring feat of endurance, a belated revelation of the Carlylean 'heroic' in history.[33] In a deeply uncharitable act of abusing the host, Pearson implicitly used the exemplary life of Galton to pour scorn on the democratic field-creating ambitions of the Sociological Society:

> Frankly, I do not believe in groups of men and women who each and all have their allotted daily task creating a new branch of science. I believe it must be done by one man who by force of knowledge, of method and

> enthusiasm hews out, in rough outline it may be, but decisively, a new block and creates a school to carve out its details […] A Sociological Society until we have found a great sociologist is a herd without a leader.[34]

Here, Pearson applied Galton's theory of hereditary genius to the question of intellectual field formation. Biography – or rather the absence of a distinguished intellectual hero – dampened the party. It is a knowledge-dialect of life-writing that creates a noble character, and a desirable line of descent.

In 1904, Karl Pearson sought to strangle at birth the emergent field of sociology; he did not succeed, but as I have argued, the vigorous first meeting of the Sociological Society provides a valuable 'host' perspective for students of literature and science, especially those thinking about the place of life-writing in that relationship. Galton's eugenic science was actually located in the kind of 'open field' that Gillian Beer's work on evolutionary narrative has been exemplary in outlining for us: a field comprising determinate lines of historical and cultural force, and yet displaying open, as yet unrealized, possibilities. It is undeniable that these possibilities may involve hindsight, and that this bestows certain pleasures of identification, which can be ironic as well as sympathetic: another perspective, to quote Noel Annan, on the 'poetry of history'. In an entry to his 'Golden Book of Thriving Families', Galton inevitably identified the Stracheys. Amidst the lineage of military commanders serving in India, from the time of Clive to the late nineteenth century, and the civil servants at work in East India House, Galton singled out a nugget of 'data' from the thus-far uncompleted biography of Giles Lytton Strachey; it is recorded that he was winner of the Cambridge 'Chancellor's Medal for English Verse'.[35] This was presented as actuarial evidence of hereditary genius. Select out that Strachey: good breeding stock! We know, of course, that the 'Chancellor's Medal for English Verse' would not be the only measure of Victorian distinction and 'noteworthiness' that Lytton Strachey, author of *Eminent Victorians*, would achieve: as we know, he would decline to breed, and would take the idea of Victorian distinction itself by the scruff of the neck.

[1] I am grateful to the journal's anonymous reader and to Paul White for the astute editorial comments that have helped me to improve this essay.
[2] Charles Darwin, *On the Origin of Species* (Harmondsworth: Penguin, 1968), p. 458.
[3] Noel Annan, 'The Intellectual Aristocracy', in *Studies in Social History: A Tribute to G.M. Trevelyan* ed. by J.H. Plumb (London: Longman Green, 1955), p. 260.
[4] James Moore, *Good Breeding: Science and Society in a Darwinian Age* (Milton Keynes: Open University, 2001), *Study Guide*, pp. 50-54.
[5] Annan published his first study of Stephen's 'Thought and Character' in 1951, but revised the study to become *Leslie Stephen: the Godless Victorian* (London: Weidenfeld, 1984).
[6] See David Amigoni, *Victorian Biography: Intellectuals and the Ordering of Discourse* (Hemel Hempstead: Harvester-Wheatsheaf, 1993) for an argument about the way in which this occurred in relation to the disciplines of English literary and historical studies.
[7] In fact the collecting together of all the necessarily dispersed accounts of the dead into the 2004 print update illustrates the concentration of cultural and intellectual capital in successive generations of the Darwin family really powerfully. For a reflection on this process, see David Amigoni, 'Distinctively queer little morsels: Imagining distinction, groups and difference in the *DNB* and *ODNB*', *Journal of Victorian Culture*, 10.2 (2005), 279-288.
[8] Gillian Beer, *Darwin's Plots: Evolutionary Narrative in Darwin, George Eliot and Nineteenth-Century Fiction*, 1983, 2nd edn (Cambridge University Press, 2000), p. 111.
[9] See for instance Susan Bernstein, 'Ape Anxiety': Sensation Fiction, Evolution, and the Genre Question', *Journal of Victorian Culture*, 6.2 (2001), 250-270.
[10] Beer, *Darwin's Plots*, p. 8.
[11] C.P. Snow, *The Two Cultures: And A Second Look* (Cambridge University Press, 1964).
[12] Beer, *Darwin's Plots*, p. 5; Beer's original work foregrounded novelistic narrative by Eliot and Hardy as the crucial interchange for the 'traffic'. However, it is important to remember that Beer accorded Milton's epic poetry a vital place in Darwin's theory construction; indeed, Darwin's reading of *Paradise Lost* was Beer's founding example of 'two-way traffic'. Recently, John Holmes has written a deep and important study on the relationship between Darwinian ideas and nineteenth- and twentieth-century British and American poetry; see John Holmes, *Darwin's Bards: British and American Poetry in the Age of Evolution* (Edinburgh University Press, 2009).
[13] Gillian Beer, *Open Fields: Science in Cultural Encounter* (Oxford University Press, 1996), p.2.
[14] Thomas Carlyle, 'The State of German Literature', *Critical Essays,* 4 volumes (London: Chapman and Hall, 1893), IV, p. 67.
[15] Beer, *Open Fields*, p. 2
[16] See for instance, 'Parable, Professionalization and Allusion in Victorian Scientific Writing', in Beer, *Open Fields*, pp. 196-215.
[17] Beer, *Open Fields*, pp. 40-41, p. 49.
[18] *The History and Poetics of Scientific Biography* ed. by Thomas Söderqvist (Aldershot/Burlington VT: Ashgate, 2007).
[19] The exception is Patricia Fara's essay, 'Framing the Evidence: Scientific Biography and Portraiture', which analyses portraits of Darwin among other canonical scientific figures.
[20] *Charles Darwin's The Life of Erasmus Darwin* ed. by Desmond King-Hele (Cambridge University Press, 2003).
[21] Charles Darwin, 'Autobiography, May 31 1876', in Charles Darwin and T.H.Huxley, *Autobiographies*, ed. by Gavin de Beer (Oxford University Press, 1983); Francis Darwin edited and published *Life and Letters of Charles Darwin, including an autobiographical chapter*, 2 vols (London: Murray, 1887).
[22] Paul White, 'Ministers of Culture: Arnold, Huxley and the Liberal Anglican Reform of Learning', *History of Science*, 43 (2005), 115-138 (p. 127, p. 119).
[23] For a reading of Huxley's linked essays, and his explicit formulation of an idea of the 'intellectual field' of culture originating two millennia ago (in 'Evolution and Ethics'), see David Amigoni,

Colonies, Cults and Evolution: *Literature, Science and Culture in Nineteenth-Century Writing* (Cambridge: Cambridge University Press, 2007), pp. 18-23

[24] See White, 'Ministers of Culture'.

[25] See John Scott, 'Victor Branford', *Oxford DNB* (2004--) http://www.oxforddnb.com/view/article/97274?docPos=2 (accessed 30 April 2010).

[26] On 26 June 1903, the Prime Minister A. J. Balfour, wrote to Branford from Downing Street, expressing support for the initiative 'to organise sociological investigations on a strictly scientific basis'. Balfour agreed to become President of the Society in 1911. *Sociological Papers* is the first iteration of the long running journal, *The Sociological Review*. For the formation of the Sociological Society and its subsequent history, see 'Foundations of British Sociology: *The Sociological Review* Archive', Keele University Library Special Collections, http://www.keele.ac.uk/depts/li/specarc/archives/leplay.htm.

[27] See Angelique Richardson, *Love and Eugenics in the Late Nineteenth Century* (Oxford University Press, 2003), pp. 137-8.

[28] *Sociological Papers*, 1904 (London: Macmillan 1905: Published for the Sociological Society). The Editorial committee consisted of: L.T. Hobhouse (chair), Geddes, G.P. Gooch, J.A. Hobson, Benjamin Kidd, J.M. Robertson, V.V. Branford (hon sec); in the early stages the committee was assisted by H.G. Wells.

[29] *Sociological Papers*, pp. 63-4.

[30] Francis Galton, 'Eugenics: its definition, scope and aims', *Sociological Papers*, pp. 45-6.

[31] *Sociological Papers*, 53-4; 'Thou wouldst as soon go kindle fire with snow./As seek to quench the fire of love with words', *Two Gentlemen of Verona*, Act II, scene 7.

[32] Francis Galton, 'A Eugenic Investigation: Index to Achievements of Near Kinsfolk of Some of the Fellows of the Royal Society', *Sociological Papers*, p. 92.

[33] *Sociological Papers*, p. 53.

[34] *Sociological Papers*, p. 52.

[35] Galton, 'A Eugenic Investigation', *Sociological Papers*, p. 99.